

Applicant: Chandrika Varadachari
Application No.: 10/567,425

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

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1. (Currently amended) A process for the preparation of water insoluble, bio-release molybdenum fertilizers which comprises heating molybdenum trioxide, one or more basic compound(s) of metal(s) selected from the group consisting of magnesium, calcium and sodium, and phosphoric acid to a temperature in a range of 250 to 350°C till a solid polyphosphate is obtained and finally obtaining the dried powder.

2. (Currently amended) A process for the preparation of bio-release molybdenum fertilizers as claimed in claim 1, wherein molybdenum trioxide and a basic compound, namely such as oxides or carbonates of magnesium, calcium and/or sodium, are heated with phosphoric acid.

3. (Previously presented) A process for the preparation of bio-release molybdenum fertilizers as claimed in claim 1, wherein polymerisation is allowed to occur by removal of H₂O between adjacent P-OH groups of phosphates with the formation of P-O-P bonds by heating.

Applicant: Chandrika Varadachari
Application No.: 10/567,425

4. (Original) A process for the preparation of bio-release molybdenum fertilizers as claimed in claim 3, wherein, the polymerisation is allowed to continue till almost complete, whereupon a dry, friable powdery material is formed.

5. (Original) A process for the preparation of bio-release molybdenum fertilizers as claimed in claim 4 wherein the dry material obtained is ground to a free flowing, non-hygroscopic product

6. (Currently amended) A process for the preparation of bio-release molybdenum fertilizers as claimed in claim 1 wherein interference by impurities in the raw materials is reduced by the addition of an oxidant, namely such as MnO₂.

7. (Previously presented) A process for the preparation of bio-release molybdenum fertilizers as claimed in claim 1 wherein the product obtained is a magnesium sodium polymolybdophosphate.

8. (Previously presented) A process for the preparation of bio-release molybdenum fertilizers as claimed in claim 1 wherein the starting materials include molybdenum trioxide containing up to 66.6% Mo, magnesia containing up to 60%

Applicant: Chandrika Varadachari
Application No.: 10/567,425

Mg, sodium carbonate containing up to 43.4% Na and phosphoric acid containing up to 60 % P₂O₅.

9. (Previously presented) A process as claimed in claim 8 wherein the weight ratio of Mo: Na: Mg: P used is 1: 0.96: 2.53: 6.46; wherein the corresponding molar ratio is 1 :4 :10 :20.

10. (Currently amended) A process for the preparation of bio-release molybdenum fertilizers as claimed in claim 8 wherein Mo: P ~~may be varied is~~ between a molar ratio of 1:5 and 1:30.

11. (Previously presented) A process for the preparation of bio-release molybdenum fertilizers as claimed in claim 8 wherein the amount of Na is at a molar ratio of 4 with respect to Mo.

12. (Previously presented) A process for the preparation of bio-release molybdenum fertilizers as claimed in claim 8 wherein the amount of Mg is in the ratio Mg: P = 1 : 2.

Applicant: Chandrika Varadachari
Application No.: 10/567,425

13. (Previously presented) A process for the preparation of bio-release molybdenum fertilizers as claimed in claim 10 wherein the starting materials include molybdenum trioxide containing up to 66. 6 % Mo, sodium carbonate containing up to 43.4 % Na and phosphoric acid containing up to 60 % P₂O₅.

14. (Previously presented) A process as claimed in claim 13 wherein the molar ratio of Mo : Na: P is, 1 : 24: 20.

15. (Previously presented) A process for the preparation of bio-release molybdenum fertilizers as claimed in claim 10 wherein the starting materials include molybdenum trioxide containing up to 66.0 % Mo, magnesia containing up to 60 % Mg and phosphoric acid containing up to 60 % P₂O₅.

16. (Previously presented) A process as claimed in claim 15 wherein the molar ratio of Mo: Mg: P is, 1 : 12 : 20.

17. (Currently amended) A process for the preparation of bio-release molybdenum fertilizers as claimed in claim 1 wherein all reactants are mixed together, and heated at a temperature range of ~~200-350°C~~ 250-350°C till dry.

Applicant: Chandrika Varadachari
Application No.: 10/567,425

18. (Previously presented) A process for the preparation of bio-release molybdenum fertilizers as claimed in claim 17 wherein the temperature is 300°C.

19. (Currently Amended) A process for the preparation of bio-release molybdenum fertilizers as claimed in claim 1 wherein molybdenum trioxide is first heated to boiling in a solution of the base, which is selected from the group consisting of oxides and carbonates of sodium, calcium and magnesium and then further heated with phosphoric acid till dry.

20. (Cancelled)

21. (Previously presented) A process for the preparation of bio-release molybdenum fertilizers as claimed in claim 10 wherein the molar ratio of Mo: P is 1: 20.

22. (Currently amended) ~~A molybdenum fertilizer, which is water insoluble but is soluble in 0.1N hydrochloric acid and 0.33M citric acid and comprises (i) at least one percent by weight of molybdenum; (ii) phosphorus in a molar ratio of Mo: P of at least 1 : 5; and (iii) at least one of the elements selected from the group consisting of magnesium, calcium, and sodium A process for the~~

Applicant: Chandrika Varadachari
Application No.: 10/567,425

preparation of bio-release molybdenum fertilizers as claimed in claim 10 wherein
the molar ratio of Mo: P is 1: 20.